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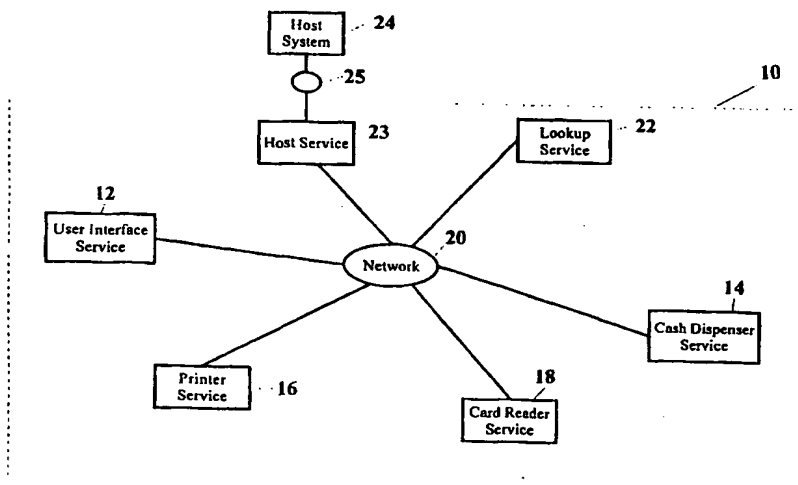
PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁷ : G06F 17/60		A1	(11) International Publication Number: WO 00/49547
			(43) International Publication Date: 24 August 2000 (24.08.00)
(21) International Application Number: PCT/US00/04130		(74) Agent: JOCKE, Ralph; 231 South Broadway, Medina, OH 44256 (US).	
(22) International Filing Date: 16 February 2000 (16.02.00)		(81) Designated States: AU, BR, CA, CN, CZ, HR, HU, ID, IL, IN, IS, JP, KE, KR, LK, LT, MX, NO, NZ, PL, RU, SE, SG, SI, SK, TR, US, VN, YU, ZA, ZW, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).	
(30) Priority Data: 60/120,506 17 February 1999 (17.02.99) US 60/133,579 11 May 1999 (11.05.99) US		Published With international search report.	
(71) Applicant (for all designated States except US): DIEBOLD, INCORPORATED [US/US]; 5995 Mayfair Road, North Canton, OH 44720 (US).			
(72) Inventors; and (75) Inventors/Applicants (for US only): DRUMMOND, Jay, Paul [US/US]; 1965 August Drive S.E., Massillon, OH 44646 (US). CICHON, Bob [US/US]; 2112 Tennyson, Apartment 6, Massillon, OH 44646 (US). SMITH, Mark, D. [US/US]; 1910 Hunting Valley N.W., North Canton, OH 44720 (US). BLACKSON, Dale [US/US]; 5056 Paddington Down Street, Canton, OH 44718 (US). WEIS, David [US/US]; 842 McKinley Boulevard, Ashland, OH 44805 (US). CHURCH, James [US/US]; 741 Governors Circle, Kent, OH 44240 (US). GILGER, Mikal, R. [US/US]; 300 Reimer Road, Wadsworth, OH 44281 (US).			

(54) Title: METHOD AND SYSTEM FOR CONNECTING SERVICES TO AN AUTOMATED TRANSACTION MACHINE



(57) Abstract

A system for connecting transaction services to an ATM (10, 500) that includes a network (20). A user interface service (12) and a lookup service (22) are in operative connection with the network. Transaction services such as a printer service (16), card reader service (18), and cash dispenser service (14) are also in operative connection with the network. These transaction services are operative to register with the lookup service and to upload a service proxy to the lookup service. The user interface service is operative to locate transaction services on the network by invoking a remote lookup method on the lookup service. The lookup service is operative to return service proxies that match the type of service that is required. The user interface service is further operative to invoke methods of the service proxies that remotely control the functionality of the transaction services on the network. The user interface service is further operative to register events with the service proxies for notification when certain events on the services occur.

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US00/04130

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G06F 17/60;
US CL : 705/35, 69, 41, 42, 43;

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 705/35, 69, 41, 42, 43;

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
STIC Library

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Dialog, IEEE, Sun Microsystems, JINI Web page.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,038,548 A (KAMIL) 14 March 2000 (14.03.2000), columns 4 and 5.	1-77
Y	US 6,031,623 A (SMITH et al) 29 February 2000 (29.02.2000), column 5, lines 23-33 and column 10, line 58 - column 10, line 23.	15, 27, 73-76
Y,P	US 6,023,684 A (PEARSON) 08 February 2000 (08.02.2000), columns 6-7	67-77
Y,P	US 6,021,399 A (DEMIERS et al) 01 February 2000 (01.02.2000), column 2, line 20 - column 3, line 14.	67-77
A,P	US 6,019,284 A (FREEMAN et al) 01 February 2000 (01.02.2000), entire document.	67-77
Y,P	US 6,018,724 A (ARENT) 25 January 2000 (25.01.2000), column 9, line 25 - column 23, line 47.	1-77
Y,P	US 6,016,484 A (WILLIAMS et al) 18 January 2000 (18.01.2000), entire document.	1-77
Y,P	US 6,012,048 A (GUSTIN et al) 04 January 2000 (04.01.2000), entire document.	9-17, 23-28, 31, 34, 36-66, 70-77
Y,P	US 6,005,942 A (CHAN et al) 21 December 1999 (21.12.1999), column 8, line 27 - column 10, line 5.	37, 67-77
Y,P	US 5,974,146 A (RANDLE et al) 26 October 1999 (26.10.1999), entire document	1-77
Y,P	US 5,893,106 A (BROBST et al) 06 April 1999 (06.04.1999), entire document.	1-77
A,P	US 5,933,816 A (ZEANAH et al) 03 August 1999 (03.08.1999), entire document.	1-77
Y,P	US 5,933,812 A (MEYER et al) 03 August 1999 (03.08.1999), entire document.	77
Y,P	US 5,912,818 A (McGRADY et al) 15 June 1999 (15.06.1999), entire document.	29

☒ Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

"I" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T"

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X"

document of particular relevance, the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y"

document of particular relevance, the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"Z"

document member of the same patent family

Date of the actual completion of the international search

26 April 2000 (26.04.2000)

Date of mailing of the international search report

15 MAY 2000

Name and mailing address of the ISA/US

Commissioner of Patents and Trademarks
Box PCT
Washington, D.C. 20231

Facsimile No. (703)305-3230

Authorized officer

James P. Trammell

James P. Trammell

Telephone No. (703) 305-3900

INTERNATIONAL SEARCH REPORT

International application No.

PCT/ISA00/04130

C (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	Phoenix Demonstrates Enhanced Remote System Management With Sun's JINI Technology. Phoenix Technologies Web Page, January 25, 1999.	1-77
A	It's Out of the Bottle - Sun Introduces JINI Connection Technology. Enabling the Simple Connection of Any Device to Any Network. Any Time. Anywhere. Sun Microsystems Press Release. Sun Microsystems Web Site, 25 January 1999.	1-77
A	YOMIURI, SHIMBUN, Report From Silicon Valley: Sun's JINI May Be Out of the Bottle. Daily Yomiuri, 22 December 1998.	1-77
A	CLARK, DAVID. Network Nirvana and the Intelligent Device. IEEE Concurrency, April-June 1999, pp.16-19.	1-77

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

REC'D 14 JUN 2001

WIPO PCT

Applicant's or agent's file reference D-1120PCT	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US00/04130	International filing date (day/month/year) 16 FEBRUARY 2000	Priority date (day/month/year) 17 FEBRUARY 1999
International Patent Classification (IPC) or national classification and IPC IPC(7): G06F 17/00 and US Cl.: 705/17,43, 39		
Applicant DIEBOLD, INCORPORATED		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 4 sheets.
- ☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority. (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 0 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of report with regard to novelty, inventive step or industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

RECEIVED

DEC 28 2001

Technology Center 2100

Date of submission of the demand 30 MAY 2000	Date of completion of this report 11 MAY 2001
Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231	Authorized officer M. Kemper <i>James R. Matthews</i>
Facsimile No. (703) 305-3230	Telephone No. (703) 305-9589

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US00/04130

I. Basis of the report**1. With regard to the elements of the international application:***

- ☒ the international application as originally filed
- ☒ the description:
pages 1-49 , as originally filed
pages NONE , filed with the demand
pages NONE , filed with the letter of _____
- ☒ the claims:
pages 50-69 , as originally filed
pages NONE , as amended (together with any statement) under Article 19
pages NONE , filed with the demand
pages NONE , filed with the letter of _____
- ☒ the drawings:
pages 1-30 , as originally filed
pages NONE , filed with the demand
pages NONE , filed with the letter of _____
- ☒ the sequence listing part of the
description: NONE , as originally filed
pages NONE , filed with the demand
pages NONE , filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international

- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☒ The amendments have resulted in the cancellation of:

- ☒ the description, pages NONE
- ☒ the claims, Nos. NONE
- ☒ the drawings, sheets/fig NONE

5. ☐ This report has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

** Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).*

***Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.*

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US00/04130

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. statement**

Novelty (N)	Claims	(Please See supplemental sheet)	YES
	Claims	(Please See supplemental sheet)	NO
Inventive Step (IS)	Claims	(Please See supplemental sheet)	YES
	Claims	(Please See supplemental sheet)	NO
Industrial Applicability (IA)	Claims	(Please See supplemental sheet)	YES
	Claims	(Please See supplemental sheet)	NO

2. citations and explanations (Rule 70.7)

Claims 1-2,7, 9-11, 30-31 lack novelty under PCT Article 33(2) as being anticipated by Rawlins, patent number 4,621,326.

Rawlins teaches an automated transaction machine comprising: a plurality of transaction function devices wherein each transaction function device includes an associated device computer processor placed in operative connection with at least one other device computer processor associated with a second transaction function device to cause the first transaction function device to become automatically interoperative with the second transaction function device in carrying out a financial transaction (col. 2, lines 30-50, line 60 - col. 3, line 60); wherein the second transaction function device is a sheet dispenser and the transaction comprises dispensing a sheet of paper (col. 3, lines 1-5); and device driver (fig. 4, 160).

Claims 57-58, 66-70, 73-76 lack novelty under PCT Article 33(2) as being anticipated by Akel et al., patent number 5,457,305.

Akel teaches an automated transaction machine comprising a processor, a data store corresponding to account information, a display device and an input device wherein the processor is placed in operative connection with the host, the processor is operative to acquire a transaction service proxy from the host and to output an interface menu responsive to the service proxy, wherein the interface menu includes a user interface indicia corresponding to the transaction function the host is to perform and wherein the processor causes the host to perform the transaction function (figs 1,2, abstract, col. 2, line 45 - col. 3, line 35, col. 4, lines 15-60, col. 5, lines 35 - col. 6, line 65).

Claims 3-6,8,12-29, 32-56, 59-65, 71,72,77 meet the criteria set out in PCT Article 33(2)-(4), because the prior art does not teach or fairly suggest processing or specific placement of the driver, driver operative in a virtual machine, or sending a copy of the service proxy to a lookup service.

(Continued on Supplemental Sheet.)

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US00/04130

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII

Sheet 10

V. 1. REASONED STATEMENTS:

The report as to Novelty was positive (YES) with respect to claims 3-6, 8, 12-29, 32-56, 59-65, 71-72, 77.

The report as to Novelty was negative (NO) with respect to claims 1-2, 7, 9-11, 30-31, 57-58, 66-70, 73-76.

The report as to Inventive Step was positive (YES) with respect to claims 3-6, 8, 12-29, 32-56, 59-65, 71-72, 77.

The report as to Inventive Step was negative (NO) with respect to claims 1-2, 7, 9-11, 30-31, 57-58, 66-70, 73-76.

The report as to Industrial Applicability was positive (YES) with respect to claims 1-77.

The report as to Industrial Applicability was negative (NO) with respect to claims NONE.

V. 2. REASONED STATEMENTS - CITATIONS AND EXPLANATIONS (Continued):

----- NEW CITATIONS -----

US 5,457,305 A (AKEL ET AL) 10 OCTOBER 1995, see figs 1,2, abstract, summary

US 4,621,326 A (RAWLINS) 04 NOVEMBER 1986, abstract, summary

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF THE RECORDING
OF A CHANGE(PCT Rule 92bis.1 and
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

JOCKE, Ralph, E.
Walker & Jocke
231 South Broadway
Medina, OH 44256
ETATS-UNIS D'AMERIQUE

Date of mailing (day/month/year) 09 October 2000 (09.10.00)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference D-1120PCT	
International application No. PCT/US00/04130	International filing date (day/month/year) 16 February 2000 (16.02.00)

1. The following indications appeared on record concerning: <input type="checkbox"/> the applicant <input type="checkbox"/> the inventor <input checked="" type="checkbox"/> the agent <input type="checkbox"/> the common representative		
Name and Address JOCKE, Ralph 231 South Broadway Medina, OH 44256 United States of America	State of Nationality	State of Residence
	Telephone No. 330-722-5143	
	Facsimile No. 330-722-6446	
	Teleprinter No.	
2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning: <input type="checkbox"/> the person <input type="checkbox"/> the name <input checked="" type="checkbox"/> the address <input type="checkbox"/> the nationality <input type="checkbox"/> the residence		
Name and Address JOCKE, Ralph, E. Walker & Jocke 231 South Broadway Medina, OH 44256 United States of America	State of Nationality	State of Residence
	Telephone No. 330-721 0000	
	Facsimile No. 330-722 6446	
	Teleprinter No.	
3. Further observations, if necessary: The agent's new address on the Demand has been considered as a change under Rule 92bis. In case of disagreement, the International Bureau should be notified immediately.		
4. A copy of this notification has been sent to: <input checked="" type="checkbox"/> the receiving Office <input type="checkbox"/> the designated Offices concerned <input type="checkbox"/> the International Searching Authority <input checked="" type="checkbox"/> the elected Offices concerned <input checked="" type="checkbox"/> the International Preliminary Examining Authority <input type="checkbox"/> other:		

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer A. Karkachi Telephone No.: (41-22) 338.83.38
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PATENT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Assistant Commissioner for Patents
 United States Patent and Trademark
 Office
 Box PCT
 Washington, D.C.20231
 ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 09 October 2000 (09.10.00)	
International application No. PCT/US00/04130	Applicant's or agent's file reference D-1120PCT
International filing date (day/month/year) 16 February 2000 (16.02.00)	Priority date (day/month/year) 17 February 1999 (17.02.99)
Applicant DRUMMOND, Jay, Paul et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:

30 May 2000 (30.05.00)

☐ in a notice effecting later election filed with the International Bureau on:2. The election ☒ was☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer A. Karkachi Telephone No.: (41-22) 338.83.38
---	---

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF THE RECORDING
OF A CHANGE(PCT Rule 92bis.1 and
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

JOCKE, Ralph, E.
Walker & Jocke
231 South Broadway
Medina, OH 44256
ETATS-UNIS D'AMERIQUE

Date of mailing (day/month/year) 09 October 2000 (09.10.00)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference D-1120PCT	
International application No. PCT/US00/04130	International filing date (day/month/year) 16 February 2000 (16.02.00)

1. The following indications appeared on record concerning:		
<input type="checkbox"/> the applicant	<input type="checkbox"/> the inventor	<input checked="" type="checkbox"/> the agent
<input type="checkbox"/> the common representative		
Name and Address JOCKE, Ralph 231 South Broadway Medina, OH 44256 United States of America	State of Nationality	State of Residence
	Telephone No. 330-722-5143	
	Facsimile No. 330-722-6446	
	Teleprinter No.	
2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:		
<input type="checkbox"/> the person	<input type="checkbox"/> the name	<input checked="" type="checkbox"/> the address
<input type="checkbox"/> the nationality		
<input type="checkbox"/> the residence		
Name and Address JOCKE, Ralph, E. Walker & Jocke 231 South Broadway Medina, OH 44256 United States of America	State of Nationality	State of Residence
	Telephone No. 330-721 0000	
	Facsimile No. 330-722 6446	
	Teleprinter No.	
3. Further observations, if necessary: The agent's new address on the Demand has been considered as a change under Rule 92bis. In case of disagreement, the International Bureau should be notified immediately.		
4. A copy of this notification has been sent to:		
<input checked="" type="checkbox"/> the receiving Office	<input type="checkbox"/> the designated Offices concerned	
<input type="checkbox"/> the International Searching Authority	<input checked="" type="checkbox"/> the elected Offices concerned	
<input checked="" type="checkbox"/> the International Preliminary Examining Authority	<input type="checkbox"/> other:	

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer A. Karkachi
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38